WHAT IS CLAIMED IS:

1. A method of altering a round trip delay measurement in a communication system, comprising the steps of:

receiving an input signal;

determining whether a predetermined tone sequence is detected; and

processing said input signal and generating a corresponding digital signal;

wherein when the tone sequence is detected, routing said digital signal to an output terminal, and further, wherein if the tone sequence is not detected, routing said input signal to said output terminal.

2. The method of claim 1 wherein said predetermined tone sequence includes a B/Bbar signal.

3. The method of claim 1 wherein the detection of said tone sequence indicates that a round trip delay is measured.

4. The method of claim 1 wherein said communication system includes a pair gain system.

5. An apparatus for altering a round trip delay measurement in a communication system, comprising:

a detector configured to receive an input signal and to detect a predetermined tone sequence;

a digital signal processor for processing said input signal and generating a corresponding digital signal; and

a selector coupled to said detector and said digital signal processor, said selector configured to receive said input signal and said digital signal;

wherein when said detector detects said predetermined tone sequence, said selector is configured to provide said digital signal to an

output terminal, and further, when the detector does not detect said predetermined tone sequence, said selector is further configured to output said input signal to said output terminal.

6. The apparatus of claim 5 wherein said predetermined tone sequence is a B/Bbar signal.

7. The apparatus of claim 5 wherein a detection of said predetermined tone sequence by said detector indicates that a round trip delay is measured.

8. The apparatus of claim 5 wherein said communication system includes a pair gain system.

9. A method of altering a round trip delay measurement in a communication system, comprising the steps of:

monitoring an upstream data transmission path for a predetermined tone sequence;

generating an artificial delay signal upon detecting the predetermined tone sequence, said artificial delay signal being shorter than an actual delay signal; and

introducing a phase reversal in the downstream data transmission path.

10. The method of claim 9 wherein said predetermined tone sequence is an A/Abar signal.

11. The method of claim 9 wherein said communication system includes a pair gain system.

12. An apparatus for altering a round trip delay measurement in a communication system, comprising:

a detector for monitoring an upstream data transmission path for a predetermined tone sequence;

a delay unit for generating an artificial delay signal when the predetermined tone sequence is detected, the artificial delay signal being shorter than an actual delay signal; and

a phase reversal unit for providing a phase reversal in the downstream data transmission path.

13. The apparatus of claim 12 wherein said predetermined tone sequence is an A/Abar signal.

14. The apparatus of claim 12 wherein said communication system includes a pair gain system.

15. A round trip delay measurement method, comprising the steps of:

monitoring a downstream data transmission path for a predetermined tone sequence;

generating a delay signal upon detecting said predetermined tone sequence; and

introducing a phase reversal in an upstream data transmission path.

16. The method of claim 15 wherein said predetermined tone sequence includes a B/Bbar signal.

17. The method of claim 15 further including the steps of:

transmitting said predetermined tone sequence; and

receiving said phase reversal.

18. The method of claim 17 wherein a round trip delay includes the time period from the transmission of said predetermined tone sequence to the reception of said phase reversal.

19. An apparatus for altering a round trip delay measurement in a communication system, comprising:

means for receiving an input signal;

means for determining whether a predetermined tone sequence is detected;

means for processing said input signal and generating a corresponding digital signal; and

means for routing said digital signal to an output terminal when said tone sequence is detected, said routing means further configured to route said input signal to said output terminal when said tone sequence is not detected.

20. An apparatus for altering a round trip delay measurement in a communication system, comprising:

means for monitoring an upstream data transmission path for a predetermined tone sequence;

means for generating an artificial delay signal upon detecting the predetermined tone sequence, said artificial delay signal being shorter than an actual delay signal; and

means for introducing a phase reversal in the downstream data transmission path.

21. A round trip delay measurement apparatus, comprising:

means for monitoring a downstream data transmission path for a predetermined tone sequence;

means for generating a delay signal upon detecting said predetermined tone sequence; and

means for introducing a phase reversal in an upstream data transmission path.